

**Stanek Window
Structural Performance Test Report
NCTL 210-2691-1
"Ultra Series 3000" Type XOX Three (3)
Panel Vinyl Sliding Glass Door
Test Date: 09/06/01**

Bang Patrick
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11/8/01

Glazing: All panels were interior glazed using sealed insulating glass with a dual leaf dual durometer back bedding and a dual leaf dual durometer snap-fit glazing bead. The overall insulating glass thickness was 1.125" consisting of a "Heat Mirror SC75" film suspended between two lites of double strength tempered glass and two air spaces created by Bayform's "Warm Edge" spacer system. A low emissivity coating was applied to glazing surface no. 3.

Weatherseals: A single strip of center fin weatherstrip (0.260" high) was located at the active meeting stile cover/ interlock, the right fixed panel meeting stile cover/ interlock, the active bottom rail, both jambs and the head. A double strip of center fin weatherstrip (0.260" high) was located at the active top rail, active lock stile and the sill. A single strip of adhesive-backed open cell foam measuring 3" by 1" by 1/2" was located at each end of the right fixed meeting stile and the right fixed panel cover/interlock. An adhesive-backed polypile pad measuring 2" by 1" by 0.500" was located at the head interior track above the right fixed panel meeting stile. An adhesive-backed polypile pad measuring 2" by 1/4" by 0.500" was located in the head at the exterior of the right fixed panel meeting stile. An adhesive-backed center fin pad measuring 2" by 1/4" by 0.500" was located at the sill at the exterior of the right fixed panel meeting stile. An adhesive-backed center fin pad measuring 2" by 1" by 0.500" was located at the sill interior track above the right fixed panel meeting stile. An open cell foam filled both fixed bottom rail hollows.

Weeps: One (1) weep hole measuring 3/8" in diameter was located at 1-1/4" from each end and at midspan of all panel bottom rail glazing channels. One (1) weep hole measuring 3/16" in diameter was located at 5-3/4" from each end of the exterior horizontal bottom rail surface of all panels. One (1) weep hole measuring 5/16" in diameter was located at 3" from each end of the fixed panel retainer located under each fixed panel bottom rail.

Interior & Exterior Surface Finish: White vinyl (PVC).

Sealant: The interior and exterior connecting perimeters were sealed with a silicone sealant. The intermediate frame stile cover and left fixed panel cover were sealed with an adhesive sealant. The intermediate frame stile ends were sealed with a silicone sealant.

Screen: An insect screen measuring 36" wide by 81-1/2" high was of mitered type corner construction with staked-in-place steel corner gussets. The screen employed fiberglass mesh cloth with a hollow vinyl spline, one pull handle, one weatherseal and one adjustable metal spring loaded roller at each end of the top and bottom rails.

TEST RESULTS

<u>Par. No.</u>	<u>Title of Test & Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.19.5.1	Operating Force		
	Active Panel		
	break-away	18 lbf	25 lbf
	open	16 lbf	20 lbf
	close	13 lbf	20 lbf

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<u>Par. No.</u>	<u>Title of Test & Method</u>	<u>Measured</u>	<u>Allowed</u>
2.2.19.5.2	<i>Deglazing - ASTM E987</i>		
	<i>Active Panel - Interior</i>		
	<i>Top Rail (50 lbf)</i>	1.8 % (0.009")	<100%
	<i>Bottom Rail (50 lbf)</i>	2.2% (0.011")	<100%
	<i>Jamb Stile (70 lbf)</i>	4.2% (0.021")	<100%
	<i>Meeting Stile (70 lbf)</i>	3.6 % (0.018")	<100%
	<i>Active Panel - Exterior</i>		
	<i>Top Rail (50 lbf)</i>	1.6% (0.008")	<100%
	<i>Bottom Rail (50 lbf)</i>	2.0 % (0.010")	<100%
	<i>Jamb Stile (70 lbf)</i>	4.6 % (0.023")	<100%
	<i>Meeting Stile (70 lbf)</i>	4.0 % (0.020")	<100%
2.1.2	<i>Air Infiltration - ASTM E283</i>		
	<i>0.57 psf (15 mph)</i>	0.1 cfm/ft ² (0.05 cfm/ft ²)	-----
	<i>1.57 psf (25 mph)</i>	0.1 cfm/ft ² (0.09 cfm/ft ²)	0.3 cfm/ft ²
2.1.3	* <i>Water Resistance - ASTM E547</i>		
	<i>5.0 gph/ft²</i>		
	<i>WTP = 2.86 psf</i>	No Leakage	No Leakage
2.1.4.2	** <i>Uniform Load Structural - ASTM E330</i>		
	<i>22.5 psf Exterior</i>	0.011"	0.324"
	<i>22.5 psf Interior</i>	0.013"	0.324"
2.1.7	<i>Welded Corner</i>	<i>Meets As Stated</i>	
2.1.8	<i>Forced Entry Resistance - ASTM F842</i>		
	<i>Level 10</i>	<i>Meets As Stated</i>	
	<i>(See Appendix A for test results)</i>		

OPTIONAL PERFORMANCE

4.3	* <i>Water Resistance - ASTM E547</i>		
	<i>5.0 gph/ft²</i>		
	<i>WTP = 9.00 psf</i>	No Leakage	No Leakage
4.4.2	** <i>Uniform Load Structural - ASTM E330</i>		
	<i>90.0 psf Exterior</i>	0.189"	0.324"
	<i>90.0 psf Interior</i>	0.102"	0.324"
	* <i>Tested with and without screen</i>		
	** <i>No glass breakage or permanent damage causing the unit to be inoperable</i>		

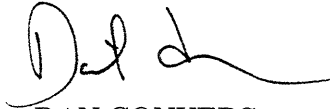
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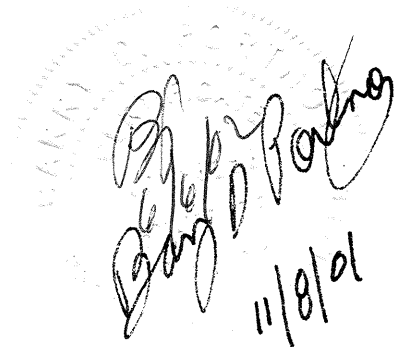
The tested specimen meets (or exceeds) the performance levels (SGD-R60) specified in Table 2.1 of AAMA/ NWWDA 101/I.S.2-97 for air infiltration. The listed results were secured by using the designated test methods and indicate compliance with the performance requirements of the referenced specification paragraphs for the product designation.

Detailed drawings were available for laboratory records and compared to the test specimen at the time of this report. A copy of this report along with representative sections of the test specimen will be retained by NCTL for a period of four (4) years. The results obtained apply only to the specimen tested. No conclusions of any kind regarding the adequacy or inadequacy of the glass in the test specimen may be drawn from this test. This report does not constitute certification of the product which may only be granted by a certification program validator.

NATIONAL CERTIFIED TESTING LABORATORIES



DAN CONYERS
Laboratory Manager



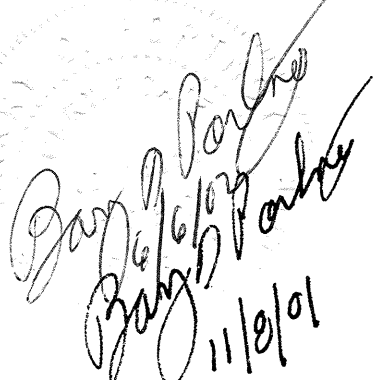
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APPENDIX A
Forced Entry Resistance Test Results

Test Method: ASTM F588-97, "Standard Test Method for Measuring the Forced Entry Resistance of Window Assemblies, Excluding Glazing Impact".

TEST RESULTS

<u>Paragraph No.</u>	<u>Loads</u>	<u>Duration</u>	<u>Measured</u>	<u>Allowed</u>
10.1-Lock Manipulation		5 Minutes	No Entry	No Entry
10.2.1.1-Test A1	L1=150 lbf	1 Minute	No Entry	No Entry
10.2.1.2-Test A2	L1=150 lbf L2= 75 lbf interior	1 Minute	No Entry	No Entry
10.2.1.3-Test A3	L1=150 lbf L2= 75 lbf exterior	1 Minute	No Entry	No Entry
10.2.1.4-Test A4	L1=150 lbf L2= 75 lbf interior	1 Minute	No Entry	No Entry
10.2.1.5-Test A5	L1= 150 lbf L2= 75 lbf exterior	1 Minute	No Entry	No Entry
10.2.1.7-Test A7	L1=150 lbf L2= 75 lbf interior L3= 25 lbf interior	1 Minute	No Entry	No Entry
10.2.1.8 Lock Manipulation		5 Minutes	No Entry	No Entry
10.2.4.1 Fixed Lite Lock Manipulation		5 Minutes	No Entry	No Entry


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